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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/564,510

01/12/2006

Yasuo Masuda

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EXAMINER

CHU, JOHN S Y

ART UNIT

PAPER NUMBER

1752

NOTIFICATION DATE

DELIVERY MODE

07/02/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

/ jcartee@kmob.com
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| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/564,510 | Applicant(s) MASUDA ET AL. | |
| | Examiner John S. Chu | Art Unit 1752 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>1/12/06, 12/14/06</u> | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1752

DETAILED ACTION

This Office action is in response to the application filed January 12, 2006.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

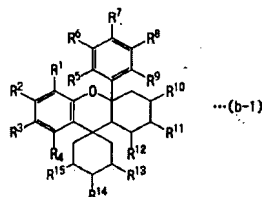
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

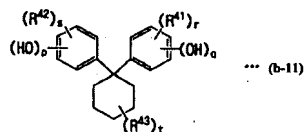
2. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by MORIUMA et al (6,274,287).

The claimed invention is drawn to the following:

1. (Original) A positive photoresist composition comprising: (A) an alkali-soluble novolak resin in which a portion of hydrogen atoms of all phenolic hydroxyl groups are substituted with 1,2-naphthoquinonediazidesulfonyl groups, and (B) a dissolution promoter comprising at least one compound selected from a group consisting of compounds represented by a general formula (b-1) and a general formula (b-11) shown below:



wherein, R^1 to R^9 each represent, independently, a hydrogen atom, an alkyl group, a halogen atom, or a hydroxyl group, although at least one of R^1 to R^9 represents a hydroxyl group; and R^{10} to R^{15} each represent, independently, a hydrogen atom, an alkyl group, an alkenyl group, a cycloalkyl group or an aryl group;



wherein, R^{41} to R^{43} each represent, independently, a lower alkyl group, a cycloalkyl group or a lower alkoxy group; p and q each represent an integer from 1 to 3; and r, s and t each represent either 0, or an integer from 1 to 3.

Art Unit: 1752

MORIUMA et al anticipates the claimed positive photoresist composition at Example 1 in column 6, line 56 – column 8, line 10. The following polyphenol compound in column 7, lines 5-10 are seen to meet the claimed ingredient (A) wherein the polyphenol is seen as a low molecular weight novolak resin which is photosensitive. The example further discloses the presence of the claimed phenols compounds (b-1) and (b-11), see column 7, lines 55-67 for the compound X and a 1,1-bis(4-hydroxyphenyl) cyclohexane.

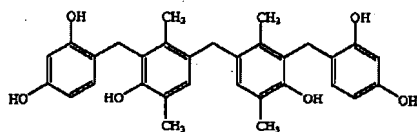
The claims as recited are anticipated and no claims are allowed.

3. Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by MIYAGI et al (6,187,500).

The claimed invention has been recited above and is included by reference.

MIYAGI et al anticipates the claimed invention at Examples 1-6 as seen in column 17, lines 25 – column 18, line 15. The interpretation by the examiner is that the ingredient (B) is seen to meet the claimed alkali-soluble novolak resin claimed as ingredient (A) wherein the following polyphenol can be seen as a low-molecular weight novolak resin:

Ingredient (B): 55 parts by weight of an ester of 1 mole of a compound represented by the following formula, and 3 moles of 1,2-naphthoquinonediazide-5-sulfonyl chloride:



Ingredient (C) found in MIYAGI et al meets the claimed compound of (b-11) as recited in claim 1 and Ingredient (D) of MIYAGI et al meets the recited photosensitizer as claimed in claim (C).

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. UETANI et al (5,290,6570 and 5,424,167) disclose the phenol compounds (b-1) and

Art Unit: 1752

(b-11) in claim 1 used in a positive photoresist composition, however lack the photosensitive novolak resin as claimed.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (571) 272-1329. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Cynthia Kelly, can be reached on (571) 272-1526

The fax phone number for the USPTO is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John S. Chu/
Primary Examiner, Group 1700

J.Chu
June 23, 2007